REMARKS

Favorable reconsideration of this application is respectfully requested.

Claims 1-4, 7, and 8 are pending in this application. Claims 5 and 6 have been cancelled without prejudice or disclaimer. Claims 1 and 7 are currently amended to correct the obvious error noted in the objection to these claims, all without the introduction of any new matter.

The outstanding Office Action includes an objection to Claims 1 and 7 and a rejection of Claims 1-8 under 35 U.S.C. § 102(b) as being anticipated by Sadre et al. (U.S. Patent No. 5,485,620, Sadre).

Initially, it is noted that the problem noted with Claims 1 and 7 reciting the limitation "the reference value" which lacks clear antecedent basis has been corrected by modifying these claims to refer to --the standard value-- which has clear antecedent basis. Accordingly, it is believed that the objection to Claims 1 and 7 has been overcome and should be withdrawn.

Before turning to the outstanding anticipation rejection presented over Sadre as to Claims 1-8, it is believed that a brief review of the present invention would be helpful.

In this regard, the present invention is concerned with a monitor apparatus for a sequential-function-chart-type programmable controller that has a reference-active-time memory unit that stores a standard value of an active time of performing an arbitrary step in a sequential-function-chart program. The monitor apparatus further includes at least a timer for measuring the actual active time of the arbitrary step and an anomalous-state monitoring unit which detects an anomalous state of the arbitrary step through comparison between the active time measured by the timer and the standard value stored in the reference-active-time memory unit.

Turning to the outstanding anticipation rejection over <u>Sadre</u>, it is clear that base independent Claims 1 and 7 include at least "a timer for measuring the active time of the arbitrary step" and "an anomalous-state monitoring unit which detects an anomalous state of the arbitrary step for comparison between the active time measured by the timer and the standard value stored in the reference-active-time memory unit." In addition, both of these base independent claims recite that there is "a reference-active-time memory unit for storing a standard value of an active time of an arbitrary step in a sequential-function-chart program." Thus, in the present invention, it is first necessary to determine and store a standard value for an active time it should take to perform at least one arbitrary step, to then measure the active time for actually doing the at least one arbitrary step, and then detecting an anomalous state of the arbitrary step by comparing the actual active time measured by the timer with the standard value time period stored in the reference-active-time memory unit. As noted in the paragraph bridging pages 3 and 4 of the Summary of the Invention of the present application, as an anomalous state is detected on the basis of the length of an active time of each monitored step as to the existence of an anomalous state, no special monitor program is needed to detect such an anomalous state. Accordingly, advantage is taken of the use of existing means, such as the timer and memory unit.

Turning to the outstanding rejection over <u>Sadre</u>, the outstanding Office Action suggests that a teaching is to be found therein as to "an active-time memory unit for storing a value of the time of an arbitrary step in a sequential-function-chart program at column 13, lines 35-65 and at column 14, lines 21-40." However, column 13, lines 35-65 and column 14, lines 21-40 do not contain any teaching of storing any value of an active time for performing an arbitrary step in a sequential-function-chart program or any other time period value.

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In this regard, column 13, lines 35-65 discuss sequential program statements that appear in step boxes. This portion of the disclosure of <u>Sadre</u> continues with a description of how the sequential program statements 128 that are being executed one at a time when step box 122 is first activated proceed. While different manners of running programs from the step boxes are discussed, nothing appears in column 13, lines 35-65 that fairly or reasonably includes a teaching as to any active-time memory unit that stores any value of an active time for an arbitrary step or any other time period value.

Similarly, column 14, lines 21-40 discuss the step box and step box activation without any mention of any "active-time memory unit," much less any mention of such a unit "storing a standard value of an active time of an arbitrary step in a sequential-function-chart program."

It is by now well established that "[w]hen the PTO asserts that there is an explicit or implicit teaching or suggestion in the prior art, it must indicate where such a teaching or suggestion appears in the reference." See <u>In re Rijckaert</u>, 28 USPQ 2d 1955, 1957 (Fed. Cir. 1993). Accordingly, the PTO is called upon to indicate precisely where in column 13, lines 35-65 or column 14, lines 21-40, or elsewhere in <u>Sadre</u> that the teaching of the recited active-time memory unit that stores the recited "standard value of an active time of an arbitrary step in a sequential-function-chart program" can be found.

Similarly, the PTO is called upon to explain how it reads the recording of a time flag (i.e., time stamp) described at col. 25, lines 50-60, as the claimed "timer for measuring the active time of the arbitrary step." In this regard, the teaching that the time tag can be used to determine the exact time between recorded events is not a statement that would indicate that any time of a arbitrary step has been measured. What <u>Sadre</u> actually teaches is that a time tag recorded for each frame is played back to generate status information displays, discussed at column 25, lines 55-60 with respect to I/O timing diagram, I/O contact history, I/O trend

diagram, or an SFC+ execution trace. Further note column 25, lines 33-40 discussing the use

of the log of the frames after "the fault condition has been detected." It is only after such

detection by other means that the log of the frames can be replayed by a user so as <u>to observe</u>

<u>by human eye</u> conditions that existed prior to the detection of the fault. It is the user who

then reviews this along with I/O status and program status information in order to determine

the cause of the fault. Clearly, not only is no specific teaching of any comparison between

any active time period measured by the timer and any standard value for such a period that is

stored in a reference-active time memory unit taught here, none is even remotely suggested.

Moreover, there is no question that no inherent comparison of any active time period

and any standard time period for the overall duration of a step is present in <u>Sadre</u>, contrary to

the suggestion in the paragraph discussing Claim 1 under the statement of the rejection of

Claims 1-8 on page 3 of the outstanding Office Action. In this regard, inherency <u>requires a</u>

<u>demonstration that something must absolutely necessarily happen</u>, not mere conjecture that

something could possibly or even probably happen. Note <u>In re Rijckaert</u>, at 28 USPQ 2d,

1957. Also note <u>In re Oelrich</u>, 212 USPQ 323, 326 (CCPA 1981) ("to establish inherency the

extrinsic evidence 'must make clear that the missing descriptive matter is necessarily present

in the thing described in the reference, and that it would be so recognized by persons of

ordinary skill. Inherency however may not be established by probability or possibilities. The

mere fact that a certain thing may result from a given set of circumstances is not sufficient.'")

(Citation omitted).

Accordingly, the rejection of Claims 1-3, 7, and 8 is improper and should be

withdrawn as <u>Sadre</u> clearly fails to teach all the subject matter included in these claims as

noted above.

In addition, Claims 2 and 3 are dependent upon Claim 1, and Claim 8 is dependent

upon Claim 7, as well as Claim 7 itself, all include additional features relative to those recited
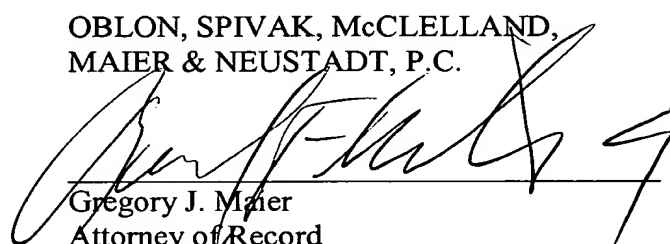
by Claim 1 that are not taught or suggested by <u>Sadre</u> and should be considered allowable for

this reason as well.

As no other issues are believed to remain outstanding relative to this application, it is

believed to be clear that this application is in condition for formal allowance and an early and

favorable action to that effect is, therefore, respectfully requested.

Respectfully submitted,

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